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**FIELD SAMPLING AND ANALYSIS PLAN
REVISION 0**

**N-FORCER SITE
DEARBORN, WAYNE COUNTY, MICHIGAN**

**U.S. EPA START-5
77 W. Jackson Boulevard
Chicago IL**

**Work Assignment No. 12634-001-001-0323
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INTRODUCTION

Weston Solutions, Inc. (WESTON®) has prepared this field Sampling and Analysis Plan (SAP) for the N-Forcer site located in Dearborn, Wayne County, Michigan. This work is being conducted under the START Program, Contract # 68-W-00-119, Technical Direction Document # 05-0212-001, Revision # 0.

The objectives of the site assessment (SA) at the N-Forcer site are to characterize the nature and extent of contamination and provide the US Environmental Protection Agency (EPA) information to determine if site conditions meet the National Contingency Plan's criterion for a removal action. If a removal action is warranted, the SA will also document the threats to human health and the environment to support EPA's issuance of an Action Memorandum.

The SAP will define the sampling and data collection methods that will be used for the project, including: sampling objectives, sampling locations and frequency, and a breakdown of the samples that will be analyzed through the Contract Laboratory Program (CLP), U.S. EPA Central Regional Laboratory (CRL), or other laboratories. The SAP will consider the use of existing data and justify the need for additional data whenever existing data is not sufficient.

SITE/FACILITY DESCRIPTION

The N-Forcer site is a light-industrial facility located in a residential, industrial and recreational area in Dearborn, Wayne County, Michigan. The facility is currently used by Die Mold Automation Components, a tool and die manufacturer. The site consists of a 16,000-square-foot steel building with approximately 2,000 square foot of office space, located on a 2.7-acre parcel. There are two parking areas east and south of the main buildings, and the CSX railroad is located along the northern boundary. Two underground storage tanks were located on the property, but have been removed.

SITE/FACILITY HISTORY

The facility was built in the late 1940's for the original occupants, National Siding, and was used

to store manufactured steel siding materials. Zonolite, a division of W.R. Grace, occupied the building from the early 1950's until 1990. In 1992, Die Mold Automation Components, the neighboring facility to the west, expanded productions onto this property. The N-Forcer facility is currently active.

Zonolite manufactured attic insulation and lightweight concrete, and it is possible that asbestos-containing materials were used during manufacturing operations. Tremolite asbestos may have been present in the ore, and therefore might have been found in the waste materials from processing.

A Level I Environmental Site Assessment was performed in 1991. A site reconnaissance was performed for the assessment, but no samples were collected. A confirmed release related to an underground storage tank was reported to the Michigan Department of Natural Resources (MDNR), and the previous site assessment indicated that the MDNR did not feel that that a sufficient investigation was conducted to confirm that contaminated soil was removed from the site.

This site has been identified as an exfoliating plant used to process ore mined in Libby, Montana. A site visit by U.S. EPA in 2000 did not identify any reason for additional action, but in September 2002, ATSDR conducted another site visit with a better understanding of what the vermiculite ore, stoner rock and processed asbestos looked like. During that visit, ATSDR observed vermiculite ore along the railroad spur that served the facility and suspicious dust in an old storage area where the stoner rock was stored. The State and local officials have requested EPA's assistance with assessment of the site.

FIELD INVESTIGATION

Soil samples will be collected from preliminary site areas around the facility. Three or four composite soil samples will be collected around the perimeter of the facility, two soil grab samples will be collected, and one dust sample will be collected in the building. Composite samples will contain at least 5 composite points in an area, and will be placed in a re-sealable bag and homogenized. The bag will also serve as the sampling container.

Air samples will be collected using air sampling pumps and drawing air through a mixed cellulose acetate filter 0.45 μ pore size air-sampling cassette. Two samples will be collected over an eight-hour interval, and approximately 4000 Liters of air will be sampled per cassette. A hand-held rotometer will be used to field calibrate the air sampling pumps. The rotometer will already have been calibrated using a primary calibration source (i.e. rated at +/- 0.1 L/min).

The samples will be identified as follows:

ST-XXX-MMDDYY

ST	-	Soil TEM Sample
SP	-	Soil PLM Sample
AT	-	Air TEM Sample
AP	-	Air PCM Sample
XXX	-	Sample Number
MMDDYY	-	6-Digit Date

ANALYTICAL PARAMETERS

Chain-of-Custody forms for Contract Laboratory Program (CLP) laboratories will be produced using U.S. EPA Forms II software and included with the samples for shipment. Samples will be analyzed for asbestos. Four soil samples and two to four air samples will be collected. Air samples will be analyzed using both Transmission Electron Microscopy (TEM) and Phase-Contrast Microscopy (PCM), and soil samples will be analyzed using TEM and PLM. The turnaround time for analytical results will be seven calendar days, unless a shorter turnaround time is requested by the OSC.

FIELD QUALITY CONTROL SAMPLES

Field duplicates will be collected at a frequency of one per 10 project samples per parameter. Field duplicates will receive a unique sample identification number and will be submitted to the laboratory as a "blind" duplicate to avoid laboratory bias. Field duplicates are analyzed to check for sampling and analytical reproducibility.

Matrix spikes are not necessary with asbestos samples. If possible, a sample of suspected material may be submitted for analysis to provide information about the concentration of

asbestos in the original waste material.

A field blank should be submitted for each lot of air cassettes used (typically one in 50 cassettes).

ANALYTICAL LABORATORY PROCEDURES

Samples are to be sent to a laboratory accredited by the United States National Institute of Standards and Technology National Voluntary Laboratory Accreditation Program (NVLAP), for asbestos analysis using soil PLM (EPA 600/R-93/116), soil TEM (U.S. EPA 40 CFR Part 763 Final Rule (AHERA)), air PCM (NIOSH 7400), air TEM (U.S. EPA 40 CFR Part 763 Final Rule (AHERA)), or other criteria as appropriate to the specified method.

The detection limit for air samples may vary based on the number of grid openings examined, but for TEM samples will be a minimum of 0.0010 asbestos structures per cubic centimeter (S/cc) and for PCM they will be a minimum of 0.010 S/cc. Soil samples will be analyzed for a detection limit of <1% using PLM. Departures from the detection limits will be consistent with CLP or other applicable requirements including method adherence, deliverables, audit procedures, and a performance evaluation equivalent to the QA/QC procedures for asbestos.

DATA VALIDATION/MANAGEMENT

A WESTON Data Validator will validate all laboratory analytical data. The laboratory SOP used to perform the analysis will be used to check quality control audits in the data packages. Upon receipt of the laboratory data package, the Sample Management Coordinator will inspect each package for completeness. Completeness is evaluated by auditing the data package for:

- Chain-of-Custody records.
- Technical holding times (not applicable for asbestos).
- Required analytical methods.
- Reporting limits.
- Reporting format.
- Laboratory and field QC reporting forms (blanks, calibrations, laboratory control

- samples, duplicates, matrix spikes, etc., as appropriate).
- Appropriate supporting data.
- Case narrative.
- Completeness of results.

Details of any missing, incomplete or incorrect parts of the data packages will be stamped "Resubmitted on [date]", attached to the original data package, and returned to the analytical laboratory. All persons receiving data packages will receive copies of the resubmitted data from the laboratory. Once it has been determined that a complete data package has been provided by the laboratory, the data package(s) will be given to the data validator.

SAMPLE PACKAGING, STORAGE, AND SHIPMENT

Sample containers will be labeled and shipped with a sample tag affixed to each container. Samples will be placed in a second plastic resealable bag. Bagged samples will be placed in appropriate transport containers and the containers will be packed with a non-vermiculite cushioning material. Samples do not need to be packed on ice. All sample documents will be affixed to the underside of each transport container lid. The lid will be sealed with shipping tape and custody seals will be affixed to the transport container. A carrier will transport the samples to the laboratory, and containers will be labeled with the origin and destination locations.

Regulations for packaging, marking, labeling, and shipping of hazardous materials and wastes are promulgated by the U.S. Department of Transportation (DOT). Air carriers that transport hazardous materials require compliance with the current International Air Transport Association (IATA) Regulations, which apply to the shipment and transport of hazardous materials by air carrier. START will follow IATA regulations to ensure compliance.

ATTACHMENTS:

- A Map of Sample Locations
- B Chain-of-Custody
- C Calibration Sheets